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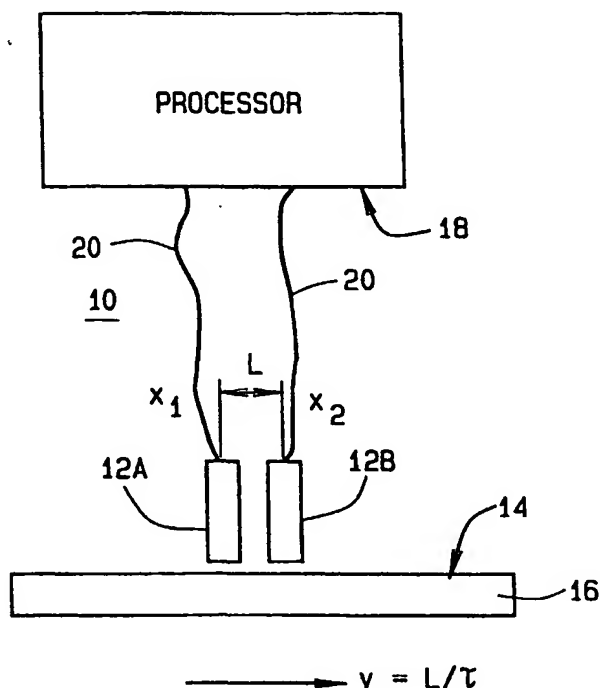
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(54) Title: SPEED SENSING METHOD AND APPARATUS

$$y(\tau) = \int x_1(t+\tau) \cdot x_2(t) \, dt$$

(57) Abstract: A method and apparatus for measuring the speed of a target object passing a pair of sensor units (12) displaced apart by a predetermined distant L in the direction of motion of the target object (16). Passage of one or more features of the target object (16) past the first sensor unit (12A) results in the generation of a signal (x_1), and passage of the same feature of the target object (16) past the second sensor unit (12B) results in the generate of a second signal, (x_2). A signal processor (18) is configured to determine a mathematical correlation between signals (x_1) and (x_2), and an associated time delay (τ_0). The speed (v) of the target object (16) is calculated by the signal processor (18) as the ratio of the predetermined distance (L) to the time delay (τ_0).

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